GEORGIANS' TRUST IN GOVERNMENT AND NON-GOVERNMENT SPOKESPERSONS CONCERNING H1N1 INFLUENZA

by

LINDSEY MACHELLE MYERS

(Under the Direction of Vicki S. Freimuth)

ABSTRACT

In April 2009, the United States declared a public health emergency in response to a growing but uncertain threat from H1N1 influenza. This study explores Georgians' trust in government and various spokespersons during the early stages of the H1N1 pandemic and the factors that lead respondents to increased or decreased trust in information provided about H1N1. A survey measuring trust levels, media usage, and knowledge was administered to Georgians in June 2009. This research used linear regressions to determine whether demographic, media usage, and self-reported knowledge variables from the survey could be used to predict trust in the government and various spokespersons. Predictors of trust included gender, minority status, income, education level, main news source, and self-reported knowledge level about H1N1. While the variance explained was low, the data did provide valuable insight and possible strategies for health communicators.

INDEX WORDS: Trust, Spokespersons, Government Spokespersons, Public Health, Risk Communication, Health Communication, Georgia, H1N1 Influenza

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DEDICATION

To Dot Rickenbaker, Dupree Rickenbaker, Betty Hydrick, and Jake Hydrick; you were not able to get here, but you made sure I did. Thank you for your continual encouragement, your belief in the value of education, your sacrifices, and your love.

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CHAPTER 1

INTRODUCTION

During a public health emergency, the successful resolution of a health risk relies heavily on the prompt cooperation of the public with government directives such as don't drink the water, dispose of tainted food products, and take necessary vaccinations or medications. A lack of trust in the government and its directives often stands in the way of the public's cooperation with suggested actions. The Pew Research Center for the People and the Press (2010) recently reported that American's level of trust in government is at an all-time low. Just 22 percent say they can trust the government in Washington to do what is right "just about always" or "most of the time," among the lowest measures in half a century. Although this low level of trust is usually assumed to be an even greater problem in minority communities, the Pew Study found the opposite trend; African Americans and Hispanics reported higher levels of trust in government than Whites. Historically, the Tuskegee study is cited as a persistent reason for low levels of trust in minority communities reinforced by the perception of biased response efforts by the government following Hurricane Katrina.

Purpose of Study

While it is common to measure the public's level of trust in government policy and in key spokespersons, few studies have tried to explain why the public is so distrustful or what can be done to try to improve that level of trust. As trust in spokespersons is especially important in gaining the public's cooperation during public health emergencies, this study used the emerging H1N1 influenza pandemic in April 2009 as an opportunity to study this issue. The purpose of

this thesis is to describe the public's trust in government and non-government spokespersons in the early stages of the H1N1 pandemic and identify the factors that might account for these trust levels. By having a better understanding of public trust in various spokespersons during a public health emergency, this research may provide suggestions and cautions for health communicators during emerging pandemics and other public health crises. By finding factors that explain public trust in spokespersons, health communicators may be able to improve public cooperation with health directives thereby improving public health and saving lives.

CHAPTER 2

LITERATURE REVIEW

Influenza Pandemics and H1N1 Influenza

A pandemic is generally defined as a disease that is prevalent over a large region and affects a large portion of the population ("Pandemic," 1988). Influenza pandemics are pandemics involving the spread of a particular influenza virus over a large geographic area, many times spanning several countries. This definition applies to the H1N1 strain of influenza virus as it first appeared in Mexico and then traveled to the United States and subsequently to more than 208 other countries by the end of 2009 (World Health Organization, 2009a). Influenza pandemics often differ in severity and the number of people they affect. From a historical perspective, influenza pandemics are not uncommon.

Influenza Pandemics in the United States

While influenza pandemics are not uncommon, there have only been three confirmed influenza pandemics in the United States since 1900. They are the Spanish Flu, Asian Flu, and Hong Kong Flu (Hilleman, 2002). The Spanish Flu occurred in 1918 and lasted until 1920 resulting in approximately 50 million deaths worldwide and 675,000 deaths in the U.S. (Hilleman, 2002; United States Department of Health and Human Services, 2011). This pandemic is the most well known and most lethal of influenza pandemics in the U.S. It also differs from the other two pandemics in that the strain of virus in this pandemic affected large numbers of young adults, much like the H1N1 virus. The Asian Flu pandemic occurred in 1957 (1.5 to 2 million deaths worldwide; 69,800 U.S. deaths), and the Hong Kong Flu pandemic

occurred in 1968 (1 million deaths; 33,800 U.S. deaths) (Hilleman, 2002; United States Department of Health and Human Services, 2011). Each of these pandemics represents a different influenza strain. Some epidemiologists have proposed that strains of influenza that result in pandemics occur in 68 year cycles, but this theory has been difficult to test as modern epidemiology and testing methods have not existed long enough to accurately test the proposition.

H1N1 Influenza

H1N1 influenza, also known as "Swine Flu," is identified as a novel H1N1 virus. The virus first emerged in Mexico in early April 2009 and had spread to 74 countries by the end of that April (BBC News, 2009). The first case detected in the U.S. was diagnosed on April 15 in a 10-year-old patient in California (Health and Human Services, 2011). By April 21, the CDC had begun working to develop a virus that could be used to make vaccine to protect against this new influenza strain, and, on April 26, the U.S. government had declared a public health emergency for H1N1 flu (Health and Human Services, 2011). The World Health Organization (WHO) declared H1N1 influenza, or swine flu, a pandemic in April 2009 as well (BBC News, 2009; World Health Organization, 2009b). The virus presented as fairly moderate causing only mild illness in most people, akin to seasonal influenza. Still, the CDC and WHO urged caution and vigilance as "the picture could change very quickly" (BBC News, 2009). As of February 13, 2010, the Centers for Disease Control and Prevention (CDC) had documented cases in all 50 states, approximately 265,000 hospitalizations due to infection with H1N1 flu, and around 12,000 deaths from the disease (Centers for Disease Control, 2010b). Approximately 87 percent of the deaths from the H1N1 pandemic have occurred in people younger than 65 years old, an

age group not considered high risk for seasonal influenza[1], and minority populations have been harder-hit by the disease than non-minority groups (Centers for Disease Control, 2010b). On June 23, 2010, the U.S. Public Health Emergency for H1N1 flu expired; on August 10, the WHO declared an end to the global H1N1 flu pandemic (Health and Human Services, 2011). The number of deaths from H1N1 in the U.S. is estimated at between 12,000 and 18,300, far milder than any of the previous three flu pandemics to hit the U.S. (Centers for Disease Control, 2010a; Health and Human Services, 2011).

H1N1 Influenza in Georgia

A review of the stories about H1N1 published in the Atlanta Journal-Constitution between April 1, 2009, and June 15, 2009, helped paint a picture of the media coverage Georgia residents were receiving prior to the survey for this research. The Atlanta Journal-Constitution (AJC) was chosen because it is the largest newspaper in Georgia and is located in the largest city, Atlanta. News coverage by the AJC started on April 28 with a story reporting the cancellation of certain flights to Mexico and its impact on various airlines that use Hartsfield-Jackson International Airport, one of the busiest airports in the country (Yamanouchi, 2009). These early stories reported no cases of H1N1 in Georgia. Other early stories continued to give updates on the number of H1N1 cases across the country and the cancellation of trips planned by local civic and college groups to Mexico. Many of the early stories question Georgia's preparedness to handle a large-scale influenza outbreak and all of them use the term "swine flu" instead of H1N1. The story of the first H1N1 case in Georgia was printed on May 1 and is notable for the complexity of the case. A woman from Kentucky went on vacation to Cancun, Mexico, and then attended a wedding in LaGrange, Georgia, when she returned (Schneider, 2009). This woman's

[1] With seasonal flu, about 60 percent of seasonal flu-related hospitalizations and 90 percent of flu-related deaths occur in people age 65 and older (Centers for Disease Control, 2010b).

case was one of the more severe H1N1 cases that required hospitalization, but there was much speculation at the time as to whether this severe form would be the most prevalent. The news stories in the early part of May 2009 center around each new case that is diagnosed, the difficulty in diagnosing cases, and whether or not to close schools. All of this coincides with President Obama's first 100 days in office and stories about his handling of the H1N1 outbreak. As the middle of May neared and the number of cases increased, it became clear that the virus was not going to be as severe as feared. Stories turned to whether it was worth it to develop a vaccine and whether the virus would come back in the fall of 2009. After May 15, news coverage about H1N1 in the AJC ceased to be daily and took on a more distanced approach of discussing the use of social media and developments in biotechnology that would be used to track H1N1. By early June, H1N1 stories had been relegated to the middle sections of the newspaper and were sparse. There was a slight increase in H1N1 coverage around June 14 as a group of seven Georgia Boy Scouts developed H1N1 while at summer camp in North Carolina (Stevens, 2009). Aside from the AJC's coverage, it is also important to note that Georgia ranks 5th for lowest life expectancy in the United States and 14th for most residents who reported fair or poor health, making the state a prime example of an at-risk population (United States Department of Health and Human Services, 2010). At the time of Georgia's H1N1 outbreak in early May, the state ranked 49th in pandemic preparedness (Judd & Newkirk, 2009).

H1N1 Implications

As the last major pandemic in the United States that targeted younger adults was the influenza outbreak of 1918, the vast majority of Americans have never experienced any sort of large-scale outbreak of a disease that mainly affects younger adults (Centers for Disease Control, 2005, 2009). This outbreak presented a unique opportunity to study the population's reaction to

government spokespersons during a public health emergency and will assist in future planning for public health emergencies.

Given the enormous potential human and economic toll of a pandemic, countries worldwide make efforts to prepare for such an occurrence. While the majority of funding goes to medical research, significant resources are also allocated to community readiness and risk communication plans designed to educate and prepare the public before and during a pandemic (Paek, Hilyard, Freimuth, Barge, & Mindlin, 2008). A major component in risk communication is knowing the target audience and assessing certain psychographics and demographics of that audience before formulating pre-event and event messaging. As Paek, et al. (2008) state, "Many of the restrictive government measures that have been proposed to contain a pandemic in the United States, such as quarantine, closing borders, or limiting freedom of assembly, may not fit with traditional American political, economic, and social values." As expected, compliance with government policies, such as quarantine, during a pandemic is typically lower when citizens do not support the policy. The level of compliance is important to note as knowledge about which citizen groups are more likely to be unsupportive of government policy can be useful in targeting groups for specific risk communication messages. Blendon, DesRoches, Cetron, Benson, Meinhardt, and Pollard (2006) point out that it is important to be aware of groups that may be less supportive of government actions as they are potentially at greater health risk during a pandemic. One way to look at this lack of support for government actions, and therefore lack of cooperation from the public, is to look at causes of non-compliance. A lack of trust in government is a major component in answering why the public may not respond to government directives.

Trust in Government

The Study of Trust

Trust has been an important construct in communication research at both the interpersonal and public policy levels for decades. While a popular research subject, the measure of trust still incites considerable controversy. Early researchers, such as Hovland, looked at communication and persuasion. Hovland and Weiss' 1951 study found that perceived credibility of the source was an important factor in a message's persuasiveness and that the trustworthiness of a particular source significantly affected whether the message was accepted (Hovland & Weiss, 1951). Considerable work by risk researchers has focused on identifying the core components of trust. In their review of the literature on trust, Renn and Levine (1991) identified the following five core components of trust: perceived competence, objectivity, fairness, consistency, and faith. Kasperson and colleagues (1992) identified four similar dimensions: commitment, competence, caring, and predictability. Metlay (1999) criticized researchers for making the trust construct so complex and argued for two dimensions which are very similar to Hovland's earlier work. He defined trustworthiness dimensions as a tightly interconnected set of affective beliefs about institutional behavior and the second dimension as perception of an institution's competence. Earle, Siegrist, and Gutscher (2007) based their model of Trust, Confidence, and Cooperation (TCC) on these two dimensions and were particularly interested in the relationship of trust and risk perception and how these constructs predicted cooperation in a risk situation. After reviewing an extensive set of studies of the relationship between risk perception and trust, Earle and colleagues concluded that the relationship is complex and contextual. They did identify a number of variables that might help explain the relationship, including knowledge of the hazard and agreement on hazard-related values. These two aspects

will be addressed in this research through the analysis of respondents' media usage for gathering H1N1 information and trust scale ratings of the government in relation to H1N1.

Trust research has been criticized because respondents are usually asked to use scales that are predetermined by the researcher, rather than characteristics selected by the respondents themselves. Meredith, Eisenman, Rhodes, Ryan, and Long (2008) took a different approach to identifying the components of trust. They conducted qualitative research with a sample of African Americans. In a series of focus groups, they asked respondents to react to escalating stages of a bioterrorism scenario. They investigated participants' responses to new information presented in each stage and whether they trusted the information and its source. They used an inductive analysis strategy to assess the role that trust played. Their analysis revealed five components of trust: fiduciary responsibility, defined as a relationship in which someone acts in the capacity of another's rights, assets, or well-being; honesty, defined as perceived truthfulness and sincerity; competency, defined as being perceived as well-qualified to perform an act; consistency, defined as uniformity and agreement among messages; and faith, defined as any mention of faith or similar words. In the present study, the quantitative scale used to measure trust was created using these dimensions.

Trust in Government

Trust can be defined as the willingness, in expectation of beneficial outcomes, to make oneself vulnerable to another based on a judgment of similarity of intention or values (Earle, et al., 2007). To emphasize, trust is based on social relations, group membership, and shared values. Trust can be further broken down into two groups: within-group trust and across-group trust. Across-group trust is trust among strangers, also called "general trust" (Earle, et al., 2007). Within-group trust includes social trust and interpersonal trust. Social trust is trust at a distance

that is based on limited information. Interpersonal trust is trust close at hand that is based on repeated interactions.

So, in looking at trust in government and non-government spokespersons, we will be looking at social trust. The general public is distanced from these spokespersons, have limited information about the situation, but know who the spokespersons are and have repeated interactions with them via media.

A recent report from the Pew Research Center for the People and the Press (2010) puts public trust in the federal government in Washington at one of its lowest levels in half a century. When the National Election Study first asked the public about its trust in government in 1958, 73 percent of Americans trusted the government to do what is right just about always or most of the time. The most recent study puts that number at 22 percent. The Pew study cites several factors as contributing to the current wave of public distrust including an uncertain economic environment, overwhelming discontent with Congress and elected officials, and a more partisan environment. Factors contributing to waves of distrust in recent history include the September 11 terrorist attacks, the war in Iraq, a series of White House and congressional scandals, the government's poor response to Hurricane Katrina, and the bank bailouts of 2008.

Similarly, a Gallup Poll (2010) conducted in September 2009 shows that trust in government fluctuates by year, but is at the lower end of the scale at present. For the question, "How much trust and confidence do you have in our federal government in Washington when it comes to handling domestic problems?" 48 percent of respondents said either "not very much" or "none at all," an all time low. In comparison, the next lowest percentage of respondents in this category (since polling began in 1972) was in October 2001 after the September 11 attacks. In the October 2001 poll, only 21 percent responded "not very much" or "none at all." When

asked, “How much trust and confidence do you have in the government of the state where you live when it comes to handling state problems,” respondents gave state government an all-time low of 49 percent responding “not very much” or “none at all.”

National disasters, such as the September 11 attacks and Hurricane Katrina, emphasize the importance of the general public’s trust in government. In preparing for a flu pandemic, it is critically important to understand the public’s level of trust that the government will be able to handle a health crisis. McComas and Trumbo (2001) point out that people expressing no trust in an institution were also notably more concerned about its ability to carry out its responsibilities. Risk communication studies illustrate that trust has also played a significant role in predicting people’s risk perceptions, risk prevention behaviors, and support for government actions (McComas & Trumbo, 2001). This research suggests that citizens’ level of trust in the government’s ability to handle a health disaster is linked to citizens following the recommendations of government agencies during a health disaster and may be predicted by certain demographic and media-related variables.

Trust, Confidence, and Cooperation Model

Trust and Risk Perception

Paul Slovic, one of the first researchers to examine the nature and significance of the relation between trust and risk perception, points out that high public concern about a risk issue is associated with distrust in the managers responsible for that risk issue (Slovic, 1993). Slovic’s observation is important because it offers a possible pathway to affecting public risk perception. If health communicators can influence the level of trust the public has in a spokesperson or government body, we might also be able to affect risk perception. Affecting the level of perceived risk, such as how likely one thinks they are to have a bad reaction to a vaccine, would

thereby affect whether one takes the risk and accepts the vaccine or refuses it. Slovic went even further to say, "trust is more fundamental to conflict resolution than is risk communication," especially when involving issues of high personal or moral importance to the individuals or groups involved (Slovic, 1993). Slovic's ideas follow earlier psychological studies of communication and trust (for example, Hovland & Weiss, 1951) where risk communication researchers pointed out that success depended not only on the content of the message but also on the level of trust between sender and receiver. Information provided by a trusted person could be accepted as objective, competent, and responsible; an individual could make confident judgments about the risks associated with a particular activity and decide whether to support it or oppose it in some way (Earle, et al., 2007). This information further highlights the importance of trust to risk communicators and public relations personnel at large, but especially in health communications as it has a high level of personal importance to the public. We must pay proper attention to building as much trust in our spokespersons and organizations as possible. But how does one influence trust? This paper looks at some possible factors that help determine an individual's trust in government and in spokespersons during a public health emergency.

Trust and Confidence

While the distinction between trust and confidence derives from the work of Luhmann (1979, 1988) and, more recently, Seligman (1997, 1998, 2001), the study of morality and performance information is rooted in social psychology. There are studies that show that morality (trust) information tends to dominate performance (confidence) information (DeBruin & VanLange, 1999a, 1999b, 2000; VanLange & Sedikides, 1998; B. Wojciszke, Bazinska, & Jaworski, 1998; G. Wojciszke, 1994). By "dominate" it is meant that, to an observer, morality information is more important and that it conditions the interpretation of performance

information. For example, given positive morality information, negative performance information is judged much less harshly than it would be if the morality information were negative. A direct demonstration of the biasing effects of shared values and trust on performance evaluation (though trust itself was not measured) is given in Lipshitz, Gilad, and Suleiman's (2001) study of the "one-of-us effect." This effect indicates that a higher level of trust in government would also indicate a less harsh judgment of performance.

Trust, Confidence, and Cooperation Model

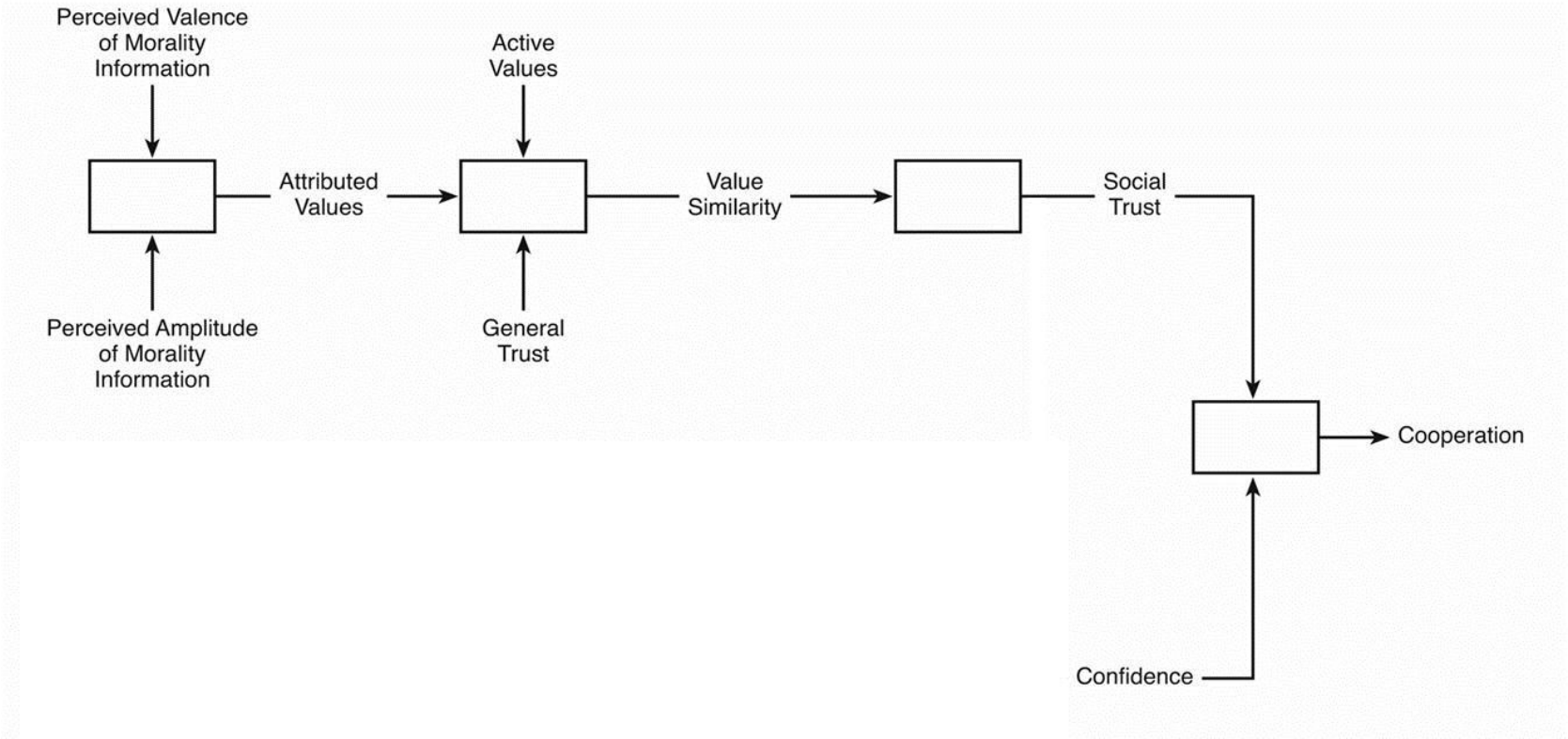
The Trust, Confidence, and Cooperation Model (TCC Model), proposed by Earle, Siegrist, and Gutscher (2002), aims to provide a framework in which all expressions of trust and confidence can be interpreted and related to one another. The model also looks to identify the basic psychological processes involved in judgments of trust and confidence and to offer an explicit account of the interaction between trust and confidence. As a result, the model hopes to eliminate some confusion brought on by other approaches that look at trust and confidence as the main elements to cooperation. The basic idea of the model is that the presence of trust and confidence can lead to cooperation. For example, a high level of trust and confidence in a public health spokesperson would lead to cooperation with the health directive that spokesperson suggests the public take (i.e. get a flu shot). Of course, the reverse would also be true. Low levels of trust and confidence lead to little or no cooperation. The TCC model shows how social trust becomes more important in times of uncertainty, when morality information is relevant, and it shows how social trust affects judgments of confidence both directly and via effects on perceived performance (Earle & Siegrist, 2006).

The model proposed by Earle and colleagues clarifies the differences in trust and confidence as follows: trust is based on social relations and shared values while confidence is

based on experience or evidence. Trust represents a judgment of similar values (not identical, just compatible) between two people or between a person and an entity that is treated as a person (Siegrist, Earle, & Gutscher, 2003). The model predicts that general trust has a positive impact on a person's ability to identify others with similar values (Siegrist, et al., 2003). In other words, people with high levels of general trust are quicker in the perception of value similarities than people with low levels of general trust. Experiments suggest that persons with high general trust cooperate more than persons with low general trust (Yamagishi, 1988; Yamagishi & Cook, 1993).

Confidence could be further clarified as a belief, based on experience or evidence, that certain future events will occur as expected (Siegrist, et al., 2003). The key distinctions between trust and confidence are apparent: trust involves risk and vulnerability, but confidence does not; trust is based on social relations, whereas confidence is based on familiarity; the objects of trust are person-like entities, but one can have confidence in just about anything that has a record of performance (Siegrist, et al., 2003).

The TCC Model, shown in Figure 2.1, has social trust on the upper path and confidence on the lower. Both paths contain variables that contribute to trust or confidence respectively and both lead to cooperation. Trust and confidence may interact, but little is known about this interaction. For example, regulations are attempts to control future behavior, with the intention of increasing confidence and cooperation. But regulations can also be interpreted as signs of value dissimilarity and distrust, perhaps leading to decline in existing trust and to overall lowered levels of cooperation (Nissenbaum, 2001; Ribstein, 2001). In the TCC model, several factors contribute to social trust: perceived valence and amplitude of morality information, attributed



Source: (Earle, et al., 2007)

Figure 2.1
TCC Model of Cooperation

values, active values, general trust, and value similarity (Earle, et al., 2007). These terms are defined by Earle and colleagues as follows:

1. *Perceived amplitude of morality information*: the judged degree to which the given information has morality implications.
2. *Perceived valence of morality information*: the judged degree of positivity/negativity of the given information (1 and 2 combine to form 3).
3. *Attributed values*: the values attributed by the observer to the other.
4. *Active values*: these are the values that are currently active for the observer – which may be the product of existing social trust relations.
5. *General trust*: general trust is defined as across-group trust or trust among strangers (3, 4, and 5 combine to form 6).
6. *Value similarity*: value similarity is the judged similarity between the observer's currently active values and the values attributed to the other (6 leads to 7).
7. *Social trust*: within-group trust distinguished from interpersonal trust as it is trust at a distance and based on limited information (7 leads to 8).
8. *Cooperation*: any form of cooperative behavior between a person and another person or group of persons, or between a person and an organization/institution.

As this research focuses on trust, only a portion of the complete TCC model will be addressed (the upper social trust branch), and data will be evaluated from the perspective of factors leading to social trust. There is a general consensus that trust is important in risk management, that it affects the judgments of risk and benefit, and, directly or indirectly, that it affects acceptance and cooperation (Siegrist, et al., 2003). In an earlier study, Siegrist, Earle, and Gutscher assessed the TCC model in the context of the public's perception of risks from

Electromagnetic Fields (EMFs) (2003). They found that in that risk context, people did not possess sufficient information about EMFs, and, therefore, relied strongly on social trust for confidence assessments. Siegrist and colleagues go on to state, "The relative importance of social trust and confidence may be context-dependent. Based on theoretical considerations, one would expect that, in a crisis, social trust would be very important but not confidence" (Siegrist, et al., 2003). In a series of three studies, Earle and Siegrist (2006) explored the efficacy of the TCC model. Results from all three studies supported the relations depicted in the TCC model, showing that judgments of social trust dominated judgments of confidence and affected judgments of past performance (Earle & Siegrist, 2006). This dominance of trust over confidence would apply directly to the H1N1 scenario being studied and helps to justify the focus on trust over confidence. The public possessed very little knowledge about H1N1 and the government's ability to handle a pandemic as there had not been one in over 90 years. This lack of previous pandemic experience would indicate a strong reliance on a more generic trust in the government to determine cooperation with government protocols. There was not enough of a "track record" involving pandemics for the public to make a confidence judgment.

In looking at the TCC model it is also noticeable that items such as demographics and the method through which the respondent receives the information from the spokesperson (ie. media source) are not mentioned. These could be important variables, and health communicators could benefit greatly from knowing their effects on increasing or decreasing trust in spokespersons.

Knowledge About H1N1

The lack of information about H1N1 also serves to "raise the stakes." Earle & Siegrist found that "participants' trust judgments depend critically on the information available to them" (2006). In the early stages of H1N1, when the data for this project were collected, little was

known about the virus, how deadly it might be, and how fast it might spread. Due to the lack of information about H1N1, trust judgments of the government's response could not easily be formed. The trust component instead relied on general trust in the government, instead of trust specifically concerning the government's actions in dealing with the emerging pandemic. Research findings about the role that knowledge plays in reacting to a risk are not consistent, but most studies do assess participants knowledge level about a specific risk in some way (Paek, et al., 2008). While Johnson (1993) points out that a lay person's knowledge about a specific risk may help them to engage in appropriate and preventative actions in response to the risk, Earle and Siegrist's (2002) work suggests that knowledge is also a component in the formulation of trust and the decision to cooperate with the suggested actions in the first place. Having a measure of knowledge levels about H1N1 and data on respondents' feelings about government during a pandemic may be useful in determining the role knowledge (or the lack of knowledge) plays in the formulation of trust. This study assesses respondents' self-reported knowledge levels about H1N1 as it is possible that those who felt they knew more about the virus may be more likely to show similar levels of trust in government during the H1N1 pandemic.

Trust in Government Agencies

As an added component to the Pew Research survey, respondents were asked about several government agencies and their trust in those agencies. The Pew survey included the CDC, which is part of the present research. Of the 15 agencies included in the Pew survey, majorities give positive job performance ratings to only six. While favorable ratings for the CDC fell by 12 points since the 1997/1998 survey, it still ranks in the top four with 67 percent having a favorable opinion of the CDC (Pew Research Center for the People and the Press, 2010). This position was shared by the FBI and Defense Department, also at 67 percent, and the

Postal Service at 83 percent. When asked how well various federal departments do their jobs, clear majorities gave excellent or good job ratings to the CDC (67%), the Defense Department (60%), NASA (57%), and the FBI (58%). The CDC is included in the list of spokespersons for this research, and level of trust in this organization will be assessed.

Variances in Trust in Government by Demographics

Cole and Fellows (2008) state that "ethnicity, class, gender, and similar demographic characteristics of audiences must be adapted to if risk communication messages are to be effective." The lack of message adaptation became especially evident after Hurricane Katrina in poor, minority communities. As Eisenman, et al. (2007) points out, poor and minority residents' decision not to evacuate may be attributed in large part to failure of government planning and resources, but sociocultural factors were also at work. Research by Blendon, et al. (2006) found widespread support across all demographic groups for compulsory quarantine during an epidemic, but when respondents were told non-compliance could lead to arrest, there was a significant decrease in support for quarantine among African Americans, women, and urban residents. A 2004 survey reports that African American and Asian American/Pacific Islanders have lower perceived fairness of public health policy in a hypothetical emergency (Eisenman, et al., 2004).

While minorities have historically been distrustful of the government, the most recent Pew survey found the opposite to be true. African Americans were more likely than whites (37% vs. 20%) to say they trust government (Pew Research Center for the People and the Press, 2010). This increase in trust represents a sharp turnaround from the balance of opinion following Hurricane Katrina when just 12 percent of blacks said they trusted the government always or most of the time, compared with 32 percent of whites. While the focus is often on racial

differences, Schlesinger and Heldman (2001) demonstrated that the gender differential can be as significant as race, with average differences between men and women's support of government policies as high as 25 percent with women being more supportive of government policies than men. The most recent Pew study also found differences in trust by education level. Trust is somewhat more widespread among college graduates (27%) than those with less education (20% of those with some college, 21% of those with a high school education or less) (Pew Research Center for the People and the Press, 2010).

Demographic information and trust certainly seem to be linked. A study by Sattler, Kaiser, and Hittner (2000) demonstrated that age and income are significant indicators of risk perception. Demographic information can serve as an indicator of risk perception, and risk perception is influenced by trust (see above, Slovic). But, could demographic information be used to predict levels of trust in spokespersons? This research ran a regression analysis on demographic information as it relates to trust levels to see whether a relationship existed between the two.

Research Questions

This review of literature on trust and factors that may contribute to level of trust in government spokespersons has led to the following research questions:

1. What was the level of trust in the government regarding H1N1 in the beginning of the H1N1 pandemic?
2. Did the level of trust vary by demographic characteristics such as gender, age, race, income, and education?

- Did the level of trust vary by media usage patterns such as main news source, how closely news of H1N1 is followed, home internet access and self-reported knowledge of H1N1?

3. What was the level of trust in various spokespersons who had been delivering information about H1N1 during the early stages of the pandemic?

4. Is there an association between respondents' trust in various spokespersons and
   - Their demographic profile (gender, age, race, income, and education)?
   - Their media usage (main news source, how closely news of H1N1 is followed, home internet access) and self-reported knowledge of H1N1?

5. Do the respondent's demographic variables, media usage, and self-reported knowledge of H1N1 help predict level of trust in government or in the various spokespersons?

CHAPTER 3

METHODS

The H1N1 pandemic provided an opportunity to assess trust in government actions in the initial stages of a serious public health crisis. A representative sample of adults in Georgia was surveyed to assess the public's reaction to this emerging health crisis in June of 2009. At that time, there was no vaccine available and uncertainty about whether one would be developed. The public health recommendations included washing hands frequently, avoiding people who were sick, staying away from crowds, and practicing proper hygiene behavior – all very similar to the recommendations for flu season. Public health officials were uncertain about the severity of the disease at this point, although the disease was trending towards being less severe than other pandemics.

To answer the research questions, a survey was developed and administered to a randomly drawn sample of adults in Georgia. The survey was conducted by Knowledge Networks (KN) and participants were drawn from their online research panel. To recruit panel members, KN uses a combination of random-digit dial and address-based probability sampling methods that cover 99 percent of the U.S. household population. To ensure that they minimize the exclusion of low-income panelists, KN provides panelists with access to the Internet and hardware, if necessary. Panelists participate in online research studies in return for Internet access and hardware or for points redeemable for cash. For this study, a statewide sample of 886 Georgia adults, 18 years of age or older, including an oversampling of African American and

Hispanic adults, was randomly drawn from KN's panel and invited to participate[2]. Between June 3, 2009, and July 6, 2009, 587 respondents completed the survey about their experiences and attitudes related to H1N1, for a completion rate of 66 percent. KN's procedures include both e-mail and telephone reminders to maximize participation (Knowledge Networks, 2009b).

Data Weighting

KN provides weighting and stratification variables for analysis, incorporating design-based weights to account for the recruitment of the panelists and both panel-based and study-specific post-stratification weights to account for nonresponse, benchmarked against the Current Population Survey. All analyses reported here are weighted to make them demographically representative of the Georgia population.

The variables used for determining the data weights for the Georgia sample include:

- Gender
- Age
- Race/ethnicity
- Education
- Metro, Non-metro residents
- Household Internet access
- Spanish Language: Non-Hispanics, Speak only/mostly/equally Spanish at home, Speak mostly/only English at home *(Dennis, 2009; Knowledge Networks, 2009a)*

These ranking variables are all components in the weighting of the Georgia data. The post-stratified weights were trimmed and scaled using the same techniques as used for national data

[2] This survey was simultaneously administered to a nationwide sample of United States residents. This sample is not discussed.

(Dennis, 2009). More information on the KN research panel is available from their website (http://www.knowledgenetworks.com).

Survey Instrument and Measures

The survey asked questions about H1N1 influenza knowledge levels, trust in the United States Government's ability to protect citizens from H1N1, trust in various spokespersons, and the respondents' main sources of information on H1N1. Knowledge about H1N1 was measured on a self-reported scale. Respondents rated their knowledge on a four-point scale from "not knowledgeable at all" to "very knowledgeable." These measures were dichotomized to simplify interpretation.

Trust in the government regarding H1N1 was measured by a scale comprised of seven questions measuring key components of the inductive model of trust proposed by Meredith and colleagues (Meredith, Eisenman, Rhodes, Ryan, & Long, 2007). It is important to remember that all trust levels that were recorded from respondents are not general trust measurements but measures of trust in the government's ability to handle the H1N1 pandemic. These dimensions were applied in the context of an H1N1 pandemic, and questions were created addressing each dimension (Quinn, Kumar, Freimuth, Kidwell, & Musa, 2009). The questions asked respondents about the level of trust they feel regarding the government's level of openness, honesty, competency, commitment to protecting citizens, caring and concern, acting in citizens' best interests, and protection of citizens' health. The questions were answered on a four-point scale (varying by response category) which ranged from not at all trusting to very trusting of the government's ability to handle the H1N1 pandemic. The wording of the questions is shown in Table 4.1. These items were highly correlated, and an exploratory factor analysis indicated that all the items loaded on one factor (Cronbach's alpha=0.91). For questions with missing data, the

mean of the remaining items was input (less than 1% missing). The mean was only used for respondents with up to two missing answers; respondents with more than two missing answers were coded as missing. A mean score was calculated for the trust scale which ranged from one to four (mean of 2.32) with higher values indicating greater trust.

Trust in spokespersons disseminating information about H1N1 was measured by a series of questions asking respondents to indicate their level of trust in each of a "list of people who have been giving us information about swine flu." It is important to remember that the measurement of trust in the spokespersons is in regard to their delivery of information about H1N1. Answers were given on a four-point scale that ranged from "Do not trust at all" to "Trust totally." See Table 4.4 for the wording of the questions.

The primary independent variables were standard demographic characteristics, media usage, and self-reported knowledge about H1N1. Demographic information included gender, age, race/ethnicity, income, and education (see Table 3.1). Media usage of the respondents regarding H1N1 included the medium of their main information source about H1N1, how closely they have been following news accounts about H1N1, and the presence of household internet. Lastly, respondents were asked to self-report their knowledge level about H1N1.

Data Analysis

The data were analyzed using SPSS using complex survey analysis procedures in order to account for the sample design and weights. All analyses except factor analysis and trust scale reliability utilized the survey weights. Demographic data were tallied and the means reported. The trust scale for trust in government was tested for reliability which resulted in a Cronbach's alpha of .91. The seven items were averaged to create a single score for trust. Bivariate analyses report adjusted Pearson Chi Square tests for categorical measures. The relationship between the

Table 3.1 Demographic Characteristics of the Sample (N=587)

Characteristic	Unweighted N	Unweighted %	Weighted %
Gender			
Male	205	34.9%	46.0%
Female	382	65.1%	54.0%
Age, years			
18-34	71	12.1%	27.2%
35-64	403	68.7%	61.6%
≥ 65	113	19.3%	11.2%
Mean		52.0	45.4
Race/Ethnicity			
White, Non-Hispanic	390	66.4%	61.8%
Black, Non-Hispanic	138	23.5%	28.1%
Hispanic	34	5.8%	5.2%
Education			
< High school	20	3.4%	8.8%
High school	70	11.9%	25.5%
Some College	187	31.9%	30.7%
Bachelor's degree or higher	310	52.8%	35.0%
Income			
< $25,000	73	12.4%	22.3%
$25,000 - $49,999	135	23.0%	25.7%
$50,000 - $74,999	126	21.5%	21.5%
≥ $75,000	253	43.1%	30.5%
Home Internet Service			
Yes	548	93.4%	73.8%
No	39	6.6%	26.2%

demographic, media usage, and knowledge variables and trust in government or spokespersons was analyzed using linear regressions. For the linear regressions, three models were used. The first included demographic data only, the second included media usage and self-reported knowledge variables, and the third model included demographics, media usage, and self-reported knowledge. Media usage and self-reported knowledge were grouped together as the two concepts have been shown to be linked (Elo & Rapeli, 2010; Massey & Montoya-Weiss, 2006; Prior, 2005; Shaker, 2009). Increased media usage indicates increased knowledge about news topics, in this case H1N1. In all analyses, a p-value of ≤ 0.05 indicated a significant finding.

CHAPTER 4

RESULTS

The first research question focused on respondents' levels of trust in the government regarding H1N1 in the early part of the pandemic. The mean score for the trust scale, which ranged from 1 to 4 with higher values indicating greater trust, was 2.32. In general, trust was not high in this early stage of the pandemic. More than half of the sample did not at all agree or only somewhat agreed that the government was committed, caring and concerned, open, competent, honest, had personal best interest at heart, and would protect them during the H1N1 pandemic. Table 4.1 shows the trust results for each item on the scale. Trust ratings were lowest for the belief that the government will protect the public from swine flu and that the government is being open with information about swine flu.

The second research question asked whether trust in the government's ability to handle the H1N1 pandemic varied across demographic groups or across the respondent's media usage or self-reported knowledge about H1N1. Table 4.2 shows the mean trust scale scores across demographic characteristics (gender, age, race/ethnicity, income levels, and education) and across media usage (main news source about H1N1, internet use, how closely H1N1 news was followed) and self-assessed knowledge about H1N1. Trust was significantly different between genders and among racial groups. Women showed a slightly higher level of trust in government (2.38) than men (2.25). Whites reported the lowest trust averages (2.22) followed by Hispanics (2.32) and Blacks (2.49). For media usage and knowledge, how closely one follows the news

Table 4.1 Trust in Government Regarding H1N1
(Ordered from highest to lowest trust)

Dimension of Trust	Unweighted N	Weighted %	
		Not at all / Somewhat	Agree / Very much
How **committed** do you think the government is with information regarding swine flu?	581	50.3	49.7
How much do you believe that the government's actions in response to swine flu are in your **personal best interests**?	582	60.3	39.7
How **competent** do you think the government is with information regarding swine flu?	583	61.4	38.6
How much **caring and concern** do you think the government has shown about people who might be affected by this swine flu outbreak?	582	62.8	37.2
How **honest** do you think the government is with information regarding swine flu?	579	63.4	36.6
How **open** do you think the government is with information regarding swine flu?	581	64.7	35.3
How much do you believe the government will **protect you** from the swine flu?	581	75.6	24.4

Table 4.2 Trust in the Government Regarding H1N1,
By Respondent Demographic Characteristics

Demographic Characteristic	Mean Trust Scale Value	SD
Total	2.32	0.59
Gender		
Male	**2.25**	0.65
Female	**2.38**	0.52
Age		
18-34	2.36	0.56
35-64	2.27	0.58
≥ 65	2.47	0.68
Race/Ethnicity		
White, Non-Hispanic	**2.22**	0.61
Black, Non-Hispanic	**2.49**	0.54
Hispanic	**2.32**	0.45
Income		
< $25,000	2.36	0.52
$25,000 - $49,999	2.19	0.58
$50,000 - $74,999	2.39	0.60
> $75,000	2.35	0.63
Education		
< High School	2.35	0.43
High School	2.26	0.61
Some College	2.25	0.58
≥ Bachelor's Degree	2.41	0.61
Main H1N1 News Source		
Television	2.30	0.58
Newspapers	2.45	0.60
Internet	2.26	0.57
Radio	2.52	0.83

Home Internet		
No	2.38	0.64
Yes	2.30	0.57
How closely have you followed the news about H1N1?		
Not closely	**2.24**	0.59
Closely	**2.37**	0.58
How knowledgeable are you about H1N1?		
Not Knowledgeable	**2.27**	0.58
Knowledgeable	**2.42**	0.59

Bold indicates $p \leq .05$

and how knowledgeable one feels about H1N1 were significant indicators of trust. Those that said they followed the news about H1N1 closely had a higher trust level in government (2.37) than those who did not follow the news closely (2.24). Respondents were asked to rate their knowledge about H1N1. Those that said they were knowledgeable about H1N1 had a higher level of trust in government (2.42) than those who did not rate themselves as knowledgeable (2.27).

The next research question focused on respondents' levels of trust in various spokespersons who were disseminating information about H1N1 in the early stages of the pandemic. Spokespersons included sources at the federal level (President Obama, the Secretaries of Health and Human Services and Homeland Security, the director of the CDC), state and local level (public health officials, elected leaders, religious leaders, and personal health care professionals), and the media. Table 4.3 shows the overall relative ranking of trust for each of these sources. Trust averages ranged from a high of 3.23 for your healthcare professionals to a low of 2.34 for religious leaders. Your healthcare professionals and the CDC were the only two spokespersons to average higher than a 3 on the trust scale with 3.23 and 3.20 respectively.

The fourth research question asked whether the levels of trust in the various spokespersons varied across demographic and media usage/knowledge characteristics. Table 4.4 shows the results of these findings. In general, females were more trusting than males, and this pattern was statistically significant for 8 of the 11 spokespersons. Only TV doctor, state government officials, and local elected officials did not show a statistically significant difference by gender. Age made a statistically significant difference for only one spokesperson, state government officials, and trust in state government increased with age. While not statistically significant, it was interesting to note that trust in your healthcare professionals decreased with

Table 4.3 Trust in Information Sources Regarding H1N1
(Ordered from highest to lowest trust)

How much do you trust information about swine flu delivered by each of the following?	Unweighted N	Mean value on 4-point scale[1]
Your healthcare professionals	578	3.23
Centers for Disease Control and Prevention officials, such as Acting Director, Dr. Besser	578	3.20
State or local public health officials	580	2.90
US Secretary of Health and Human Services (Kathleen Sebelius)	579	2.89
A doctor who appears on TV, such as Dr. Sanjay Gupta on CNN	580	2.77
President Obama	574	2.60
TV, radio or newspaper reporters	582	2.60
Secretary of Homeland Security (Janet Napolitano)	581	2.59
State government officials, such as governor	579	2.54
Local elected officials, such as mayor, county commissioner	579	2.44
Religious leaders	577	2.34

[1]Scale: 1=Do not trust at all; 2=Trust a little; 3=Trust somewhat; 4=Trust totally

Table 4.4 Trust in Information Sources about H1N1, By Respondent Demographic Characteristics
(Ordered from highest to lowest trust)

	Trust in Information Sources about H1N1										
Demographic Characteristics	Your healthcare professionals	Centers for Disease Control	State or local public health officials	Secretary of Health & Human Services	TV doctor, such as Dr. Sanjay Gupta	President Obama	TV, radio, or newspaper reporters	Secretary of Homeland Security	State government officials, governor	Local elected officials, mayor	Religious leaders
Mean Trust	3.23	3.20	2.90	2.89	2.77	2.60	2.60	2.59	2.54	2.44	2.34
Gender											
Male	**3.13**	**3.12**	**2.77**	**2.71**	2.71	**2.50**	**2.48**	**2.41**	2.49	2.44	**2.23**
Female	**3.32**	**3.26**	**3.01**	**3.05**	2.82	**2.69**	**2.71**	**2.74**	2.59	2.45	**2.44**
Age											
18-34	3.26	3.15	2.99	2.95	2.81	2.65	2.66	2.48	**2.44**	2.39	2.36
35-64	3.23	3.21	2.83	2.87	2.77	2.58	2.58	2.63	**2.56**	2.43	2.30
≥ 65	3.21	3.25	3.06	2.90	2.72	2.62	2.59	2.62	**2.71**	2.62	2.51
Race/Ethnicity											
White, Non-Hispanic	3.20	3.16	2.85	**2.76**	**2.69**	**2.36**	**2.48**	**2.47**	2.53	2.41	**2.27**
Black, Non-Hispanic	3.25	3.29	3.00	**3.14**	**2.82**	**3.09**	**2.87**	**2.83**	2.65	2.51	**2.45**
Hispanic	3.42	3.07	3.01	**2.99**	**3.07**	**2.88**	**2.38**	**2.76**	2.33	2.55	**2.78**
Income											
< $25,000	3.21	3.20	2.94	**3.08**	**3.00**	**2.77**	**2.89**	2.65	2.55	**2.41**	2.28
$25,000-$49,999	3.33	3.11	2.88	**2.86**	**2.76**	**2.64**	**2.54**	2.66	2.51	**2.37**	2.55
$50,000-$74,999	3.11	3.26	2.91	**2.91**	**2.64**	**2.63**	**2.56**	2.57	2.47	**2.37**	2.30
>$75,000	3.25	3.22	2.88	**2.76**	**2.71**	**2.44**	**2.47**	2.50	2.61	**2.58**	2.24

Demographic Characteristics	Your healthcare professionals	Centers for Disease Control	State or local public health officials	Secretary of Health & Human Services	TV doctor, such as Dr. Sanjay Gupta	President Obama	TV, radio, or newspaper reporters	Secretary of Homeland Security	State government officials, governor	Local elected officials, mayor	Religious leaders
Education											
< High School	3.24	**3.13**	2.75	3.15	2.96	2.83	**2.86**	2.90	2.42	**2.41**	2.63
High School	3.32	**3.15**	2.93	2.85	2.86	2.47	**2.66**	2.53	2.56	**2.39**	2.32
Some College	3.14	**3.10**	2.84	2.80	2.66	2.62	**2.62**	2.51	2.47	**2.34**	2.28
≥ Bachelor's Degree	3.26	**3.33**	2.97	2.93	2.76	2.64	**2.47**	2.62	2.63	**2.57**	2.34
H1N1 News Source											
Television	3.25	3.20	2.91	2.90	**2.83**	2.62	**2.65**	2.60	2.56	2.48	2.35
Newspapers	3.15	2.98	3.02	2.95	**2.56**	2.66	**2.43**	2.62	2.71	2.40	2.48
Internet	3.14	3.24	2.75	2.76	**2.50**	2.37	**2.36**	2.41	2.31	2.22	2.20
Radio	3.43	3.52	2.95	3.06	**3.03**	2.98	**2.72**	2.82	2.62	2.62	2.29
Home Internet											
No	3.30	3.18	2.89	2.93	**2.98**	**2.76**	2.64	**2.82**	2.47	2.35	2.43
Yes	3.21	3.20	2.90	2.88	**2.70**	**2.55**	2.59	**2.51**	2.57	2.47	2.31
How closely have you followed the news on H1N1?											
Not closely	**3.02**	**3.11**	**2.79**	**2.73**	**2.61**	**2.52**	**2.50**	**2.44**	**2.43**	**2.35**	**2.17**
Closely	**3.38**	**3.26**	**2.98**	**3.00**	**2.88**	**2.66**	**2.67**	**2.69**	**2.62**	**2.51**	**2.46**
How knowledgeable are you about H1N1?											
Not knowledgeable	**3.19**	3.17	**2.85**	**2.85**	**2.73**	2.59	2.61	2.56	2.53	2.43	2.32
Knowledgeable	**3.34**	3.26	**3.01**	**3.00**	**2.86**	2.65	2.58	2.66	2.56	2.46	2.40

Bold indicates a significance of $p \leq .05$.

age, while trust in the CDC and TV doctors increased with age. There were statistically significant differences for different racial/ethnic groups in trust across six of the 11 spokespersons. The pattern across the six items was consistent with the overall trust levels in that whites usually trusted less and the Black or Hispanic groups usually trusted more. There was an exception to this finding. Hispanics reported the lowest trust in news reporters (2.38) compared to whites (2.48) and Blacks (2.87). Hispanics reported especially high trust in religious leaders (2.78) followed by Blacks (2.45) and whites (2.27). There were statistically significant differences among income groups for five of the 11 spokespersons. For four of the five (Secretary of Health & Human Services, TV doctors, President Obama, and reporters) the lowest income group reported the highest trust with trust decreasing as income increased. The exception to this pattern was for local elected officials. Those with the highest income reported the greatest level of trust and those with mid-range incomes reported the lowest trust. Individuals with different education levels reported significantly different amounts of trust for three of the 11 spokespersons. Trust in the CDC increased with education level, while trust in news reporters decreased with education. Trust in local elected officials followed a similar pattern to the income demographic. Trust was greatest among those with the most education (2.57) followed by those with less than a high school degree (2.41), those with a high school degree (2.39), and those with some college (2.34).

For the media usage and knowledge characteristics, main news source about H1N1 was significant for two of the 11 spokespersons. The spokespersons TV doctors and reporters were trusted the most by those who used radio for their main news source (3.03 and 2.72 respectively), followed by those who used television (2.83 and 2.65) and newspapers (2.56 and 2.43). Those who used the Internet as their main news source for H1N1 information trusted TV doctors and

reporters the least with 2.50 and 2.36 respectively. The presence of home Internet had a significant correlation with trust in spokespersons for TV doctors, President Obama, and the Secretary of Homeland Security. Those who had home Internet trusted these spokespersons less than those without Internet. How closely one followed the news about H1N1 was significant across all spokespersons. Those who followed the news closely had a higher average trust in all the spokespersons. How knowledgeable one rated oneself about H1N1 was significant for four of the top five trusted spokespersons. For personal healthcare professionals, public health officials, Secretary of Health & Human Services, and TV doctors trust was higher for respondents who said they were knowledgeable about H1N1.

The fifth research question focused on the possibility of demographic, media usage, and knowledge variables helping to predict trust in government and in the various spokespersons regarding H1N1. A regression analysis was used to explain the variability in trust for the government and the various spokespersons. For trust in government, first the demographic variables were regressed and explained 8.3 percent of the variance in trust (see Table 4.5). The significant predictors were race/ethnicity, income, and education. Non-white groups were more likely to trust government than whites, with Blacks being significantly more likely to trust government than whites. The two highest income groups are more likely to trust government than the lowest income group, and the mid-range $25,000 to $49,999 income group is significantly less likely to trust government than the lowest income group. Education level predicts that generally the better educated someone is, the less likely they are to trust government. The "some college" group is significantly less likely to trust government than those with less than a high school degree. Next the media usage and knowledge characteristics for trust in government were regressed and explained 2.2 percent of the variance. For this group,

Table 4.5 Multiple Regression Coefficients (SE) for Predictors of Trust in Government Regarding H1N1

Demographic and Attitudinal Characteristics Regarding H1N1	Model 1 Demographics Only	Model 2 Media Usage and Knowledge Only	Model 3 Demographic, Media Usage, and Knowledge
Gender (Ref: Female)			
Male	-0.059	-	-0.062
Age (Ref: 18-34)			
35-64	-0.071	-	-0.100*
≥ 65	0.095		0.071
Race/Ethnicity (Ref: White, Non-Hispanic)			
Black, Non-Hispanic	0.232***	-	0.229***
Hispanic	0.064		0.038
Income (Ref: < $25,000)			
$25,000 - $49,999	-0.141**		-0.130*
$50,000 - $74,999	0.031	-	0.055
> $75,000	0.032		0.058
Education (Ref: < High School)			
High School	-0.110		-0.141
Some College	-0.157*	-	-0.143
≥ Bachelor's Degree	-0.046		-0.066

H1N1 news source: (Ref: Television)			
Newspaper	-	0.056	0.076
Internet		-0.013	-0.013
Radio		0.078	0.088*
Home Internet (Ref: No home internet)			
Yes – Have home internet	-	-0.046	-0.069
How closely are you following news accounts about swine flu? (Ref: Not closely)	-		
Closely		0.078	0.056
How knowledgeable are you about swine flu? (Ref: Not knowledgeable)			
Knowledgeable	-	0.102*	0.100*

*p ≤ .05; **p ≤ .01; ***p ≤ .001

only self-assessed knowledge was significant. Feeling more knowledgeable about H1N1 predicts higher trust in government. Finally, demographics, media usage, and knowledge were combined and explained 10.7 percent of the variance in trust in government. In this final model, age, race, income, news source, and self-assessed knowledge about H1N1 were the strongest predictors of trust. Those in the middle age group (age 35 to 64) were significantly less likely to trust government than the youngest age group. Blacks were significantly more trusting of government than whites, and those with an income range of $25,000 to $49,999 were significantly less trusting of government than the lowest income group. Those who get the majority of their news about H1N1 from the radio instead of television are significantly more likely to trust government, and self-assessed knowledge has a positive relationship with trust in government.

For trust in various spokespersons, the demographic, media usage, and knowledge variables were regressed and explained anywhere from a low of 3.6 percent (CDC) to a high of 13.4 percent (President Obama) of the variance in trust (see Table 4.6). The only predictor that was not significant for any spokespersons was self-assessed knowledge about H1N1; all other demographic characteristics and media usage characteristics were significant predictors for at least one spokesperson. Gender was a significant predictor of trust for six of the 11 spokespersons; being male predicted lower levels of trust in the spokesperson. Age was only a significant predictor for public health officials with membership in the middle age group (35-64) predicting one would be less trustful of public health than the lowest age group. Race/ethnicity was a significant predictor for several spokespersons. Being Black predicted higher trust in four of the spokespersons (Secretary of Health & Human Services, President Obama, reporters, and Secretary of Homeland Security) than whites, and being Hispanic predicted higher trust in two of

Table 4.6 Multiple Regression Coefficients (SE) for Predictors of Trust in Spokespersons (most trusted for H1N1 information to least trusted)

Demographic and Attitudinal Characteristics Regarding H1N1	Your healthcare professionals	Centers for Disease Control	State or local public health officials	Secretary of Health & Human Services	TV doctor, such as Dr. Sanjay Gupta	President Obama	TV, radio, or newspaper reporters	Secretary of Homeland Security	State government officials, such as governor	Local elected officials, such as mayor	Religious leaders
% of Variance Explained	8.4%	3.6%	6.8%	9.8%	8.3%	13.4%	11.4%	7.8%	4.5%	6.2%	5.2%
Gender (Ref: Female)											
Male	-0.124**	-0.082	-0.159***	-0.159***	-0.034	-0.012	-0.091*	-0.153**	-0.041	0.024	-0.100*
Age (Ref: 18-34)											
35-64	-0.070	0.041	-0.145**	-0.066	-0.055	-0.047	-0.088	0.048	0.029	-0.013	-0.069
≥ 65	-0.069	0.060	-0.005	-0.010	-0.029	0.033	-0.006	0.043	0.067	0.106*	0.029
Race/Ethnicity											
(Ref: White, Non-Hispanic)											
Black, Non-Hispanic	-0.031	0.056	0.038	0.142**	0.026	0.345***	0.195***	0.139**	0.047	0.067	0.044
Hispanic	0.003	0.037	0.022	0.028	0.056	0.113*	-0.067	0.045	-0.053	0.055	0.094*
Income (Ref: < $25,000)											
$25,000 - $49,999	0.123*	-0.067	-0.068	-0.147**	-0.096	-0.096	-0.197***	0.001	-0.081	-0.071	0.115*
$50,000 - $74,999	0.018	0.019	-0.041	-0.064	-0.132*	-0.032	-0.120*	0.027	-0.100	-0.070	0.056
> $75,000	0.113	-0.024	-0.061	-0.156*	-0.093	-0.096	-0.151*	0.008	-0.042	0.058	0.035
Education (Ref: < High School)											
High School	0.045	0.030	0.064	-0.210**	-0.030	-0.131	-0.151*	-0.141	0.079	-0.021	-0.149
Some College	-0.036	-0.001	0.050	-0.212**	-0.073	-0.053	-0.177*	-0.112	0.035	-0.07	-0.163
≥ Bachelor's Degree	0.044	0.143	0.167	-0.114	0.039	-0.009	-0.238**	-0.064	0.171	0.113	-0.118

Demographic and Attitudinal Characteristics Regarding H1N1	Your healthcare professionals	Centers for Disease Control	State or local public health officials	Secretary of Health & Human Services	TV doctor, such as Dr. Sanjay Gupta	President Obama	TV, radio, or newspaper reporters	Secretary of Homeland Security	State government officials, such as governor	Local elected officials, such as mayor	Religious leaders
H1N1 news source											
(Ref: Television)											
Newspaper	-0.064	-0.100*	0.025	0.059	-0.089	0.054	-0.019	0.002	0.037	-0.062	0.025
Internet	-0.047	0.029	-0.097*	-0.031	-0.135**	-0.033	-0.075	-0.016	-0.117*	-0.148**	-0.019
Radio	0.055	0.066	0.009	0.060	0.071	0.107*	0.078	0.066	-0.004	0.008	-0.001
Home Internet											
(Ref: No home internet)											
Yes – Have home internet	-0.017	0.004	0.026	0.061	-0.095	-0.103*	0.060	-0.148**	0.094	0.087	-0.013
How closely are you following news accounts about swine flu?											
(Ref: Not closely)											
Closely	0.243***	0.107*	0.119*	0.132**	0.103*	-0.003	0.082	0.070	0.132**	0.105*	0.134**
How knowledgeable are you about swine flu?											
(Ref: Not knowledgeable)											
Knowledgeable	0.059	0.029	0.075	0.066	0.052	0.017	-0.016	0.060	-0.014	-0.020	0.027

*p ≤ .05; **p ≤ .01; ***p ≤ .001

the spokespersons (President Obama and religious leaders) than whites. Income was a significant predictor of trust for five of the spokespersons. For your healthcare professional, the higher income group reported higher trust than the lower income groups, but for the Secretary of Health and Human Services, income functioned differently. The lowest income range had higher trust in the Secretary of Health & Human Services. A similar pattern was found for TV doctors and reporters. Lastly, income was a significant predictor for religious leaders; the mid-range income group had higher trust in religious leaders than the lowest income group. Education level achieved was a significant predictor of trust for two spokespersons. More educated groups reported less trust than those who had not received a high school diploma for the Secretary of Health and Human Services and for reporters. The media usage and knowledge characteristics were significant predictors of trust for several spokespersons. Main news source for H1N1 information was a significant predictor for six of the spokespersons. For the CDC, getting one's news from newspapers instead of television was a predictor of lower trust. Getting one's news from the Internet instead of television was a significant predictor of lower trust for public health officials, TV doctors, state government officials, and local elected officials. Getting one's news from radio instead of TV was a predictor of higher trust in President Obama. The presence of home Internet was a significant predictor of lower trust for the Secretary of Homeland Security, and following the news closely was a significant predictor of higher trust in eight of the 11 spokespersons (your healthcare professional, CDC, public health, Secretary of Health & Human Services, TV doctors, state government officials, local elected officials, and religious leaders).

CHAPTER 5

DISCUSSION

During public health emergencies that involve large segments of the population, the need for communication with the public regarding government health directives and instructions is critical. What health communicators must work to ensure is that the public will listen to and trust what is being said. Emergency communication does little, if any, good if the intended audience is deaf to its message. Starting to unravel the mystery of why certain audiences listen to emergency health directives and why others do not, is the purpose of this research. To begin, let us revisit the context of the research, the research questions asked, and the importance of their results. It is important to remember that all trust levels that were recorded from respondents are not general trust measurements but measures of trust in the government's ability to handle the H1N1 pandemic. The same is to be said for the measure of trust in the various spokespersons; the measurement in this research is of trust in the spokespersons regarding their delivery of information about H1N1. All data for this research were collected in Georgia during the early stages of the H1N1 pandemic. At that time, no vaccine had been developed. Public health officials were uncertain about the severity of the disease at that point, although it was beginning to be clear that the disease would be less severe than other pandemics. There was starting to be some question among Georgians about the media blowing the story out of proportion, but fears about the disease were still present. It is also important to remember that Georgia ranks 5th for lowest life expectancy in the United States and 14th for most residents who reported fair or poor health, making the state a prime example of an at-risk population (United States Department of

Health and Human Services, 2010). At the time of this survey, Georgia also ranked 49th in pandemic preparedness (Judd & Newkirk, 2009).

The first research question focused on respondents' levels of trust in the government regarding H1N1 in the early part of the pandemic. As indicated on the seven-item trust scale, trust in the government was low. Not a single item on the trust scale had over 50 percent agreement from the respondents. This finding offers a new use for the seven characteristics on the trust scale: a list of possible areas for improvement. These seven items would be useful for health communicators to be aware of as unmet needs. Communicators sometimes hesitate to tell the public bad news in an emergency situation for fear of panic, but government openness and honesty, two components of trust, received extremely low scores and contributed to the overall low trust score the government received. The low scores and low trust levels indicate that these characteristics are important to the public, especially during a health emergency, and should not be ignored.

The second research question asked whether trust in government varied across demographic groups or across the respondent's media usage and knowledge. As forecasted by the Pew survey, overall trust in government is low, but there are a few interesting points in this data. The first is the higher level of trust in government that minorities, especially Blacks, currently report. This is most likely due to the country having its first African-American president. The presence of President Obama in office would have been unique and consistent with the Pew survey data. With this higher level of minority support and an eye towards prevention practices for the next pandemic, it might be a good time to create and test public service messages for minorities. Messages could be crafted to both help maintain trust in government health services and to offer disease prevention instruction. The second point the

data in Table 4.2 highlighted is that those who followed the news about H1N1 closely and felt they were knowledgeable about H1N1 had significantly higher trust in government. These are two actions that can be incorporated into messaging during a pandemic. For example, messages could encourage the public to find out all they can, and health communicators could partner with reliable news sources (tv networks, newspapers, Internet news sites, etc.) to recommend places where the public can go for information outside of government sources. This tactic, in turn, would lend credibility to government information.

The third research question focused on respondents' levels of trust in various spokespersons who were disseminating information about H1N1 in the early stages of the pandemic. Of the top two most trusted spokespersons, both rated above a three on the four-point scale, one is non-government (your doctor) and one is government (CDC). So, not all government spokespersons are distrusted. The CDC holds a fairly high level of trust with residents of Georgia and, as the Pew survey showed, with the entire country. It would also be important to note that the CDC is located in Atlanta, Georgia. This higher level of trust would indicate that using the CDC's logo, spokespersons, and website to disseminate information is a successful thing to do during a public health emergency. The organization is highly respected, and their seal of approval means trustworthy information to the public. The high level of trust in one's personal physician would also suggest messaging opportunities. Recommendations in health messages that people ask their physicians or consult the CDC website should be well received. This trust in physicians and the CDC also indicates that the CDC's use of their website to provide electronic materials (informational flyers, brochures, etc.) to physician offices is a good step and that physicians should take advantage of this resource.

The fourth research question asked whether the levels of trust in the various spokespersons varied across demographic and media usage and knowledge characteristics. The levels of trust certainly did vary by spokesperson and demographics and media usage and knowledge characteristics did make a difference in those trust levels. This finding clearly indicates that certain spokespersons are going to have more success with some segments of the public than others. Customizing the spokesperson to the demographic the health communicator is trying to reach would be a promising method to inspire trust in the information being delivered. It is also important to note that those who used the Internet as their main news source about H1N1 trusted nearly all of the spokespersons less than those who used other news sources. A special effort may need to be made to target this group and make sure they are receiving correct information from reliable sources. It would also be interesting to know what Internet sources these people use the most for news. This information could provide partnering opportunities between more highly regarded spokespersons (such as the CDC) and these Internet news sites.

The fifth research question focused on the possibility of demographic, media usage, and knowledge variables helping to predict trust in government and in the various spokespersons. For the more generic question of trust in government about H1N1, being a minority, having a higher income, having a low education level, and feeling more knowledgeable about H1N1 were all predictors of a higher level of trust in government. Theoretically, one could focus less of a communication effort on these groups as they are more likely to respond to the messages they do hear, but this tactic has logistical and ethical implications. Logistically, isolating these groups may be quite difficult. Ethically, health communicators will have to consider whether limiting communication resources for certain demographics is the right/ethical thing to do. The opposite

side of the argument would be to focus more of a communication effort on these groups as they are more likely to listen and possibly spread the message to friends and family.

For the finding that being Black made one statistically more likely to trust government than whites, one should remember the political climate in which this survey was conducted. At the time, being Black may have been an indicator of higher trust levels in government, but this information may very well be subject to change with a change in president or ruling political party. Historical data from the Pew Research Center indicates that Blacks trust government more when a Democrat is president and less when a Republican is president (Pew Research Center for the People and the Press, 2003). The finding that having a higher income level was a predictor of trust in government would seem to make sense in a capitalistic society. The U.S. government generally works to further business and grow personal wealth, so having wealth would indicate that one has benefited from government policies, perhaps leading to trust in government.

The finding that listening to radio for H1N1 news was a predictor of increased trust in government is notable for health communicators. In a television age that is rapidly becoming an Internet/social media age, radio is often over looked. Radio is portable, easily accessible, and often equated with emergency communications such as with a "weather radio." While H1N1 certainly did not cause any power outages that would necessitate the use of radio, this medium is used by many people for news and information. Much like television, one can also choose the station one listens to for news, especially political commentary, catering to personal preferences. By choosing the view point that their news about government and H1N1 was delivered from (ie. conservative, moderate, or liberal), listeners likely felt a sense of control over the medium that may have increased their sense of trust in the information they were being given. As a result,

health communicators may want to seriously consider their use of radio in communication plans. Another benefit of the use of radio is that it encompasses all income groups. Radios are easily affordable, and it is not uncommon for a family to own several radios, so radio could be a way of engendering trust in lower income groups. The use of radio to disseminate emergency public health information could easily be a winning combination for health communicators and the public.

The finding that feeling more knowledgeable about H1N1 predicted trust in government should be highly encouraging to all health communicators. Every attempt to make the public more knowledgeable about H1N1 was of potential benefit to trust levels in government. Knowing the link between knowledge about a health emergency and its positive effects on trust in government should also help communicators convince local, state, and federal officials of the necessity of a strong communications program.

The question of predictors of trust in spokespersons is a much more complicated answer and limited by the parameters of this study. Some of the overarching themes seem to be that men are likely to accord less trust to spokespersons than women; those who get their news from newspapers and the Internet are likely to accord less trust to spokespersons than TV watchers; and those who follow news accounts more closely are more likely to accord higher trust to the spokespersons they are hearing from. These are all points for health communicators to keep in mind when crafting emergency health messages. It could influence the chosen spokesperson for the message, the angle of the appeal to the audience, and the content of the message. Still, it is important to note that the variance explained by the demographics, media usage, and knowledge variables are quite small, ranging from a low of 3.6 percent of variance explained for the CDC to a high of 13.4 percent of variance explained for President Obama. The low level of variance

explained indicates that there are some important variables missing from the study of what contributes to trust in a spokesperson. The answers are not all contained in the measures of demographics, media usage, and self-reported knowledge. For future study, perhaps it would be useful to include measures of political affiliation, health/wellness, the presence of a chronic health condition, and general trust levels in others.

Implications for the TCC Model

The TCC model identifies the basic psychological processes involved in judgments of trust and confidence and offers an explanation of the interaction between trust and confidence. While the model focuses on the psychological processes involved in deciding at what level to trust various spokespersons, variables such as demographics and the medium through which the spokesperson is heard are not discussed as potential influencers on trust levels. Part of this research was to determine if these variables might lead to an increase or decrease in trust in the government or various spokespersons. While the current research shows some variance in trust explained by these variables, this researcher does not feel that the data are conclusive enough to warrant any suggested changes to the TCC model at this point. Still, this leaves many new avenues of research open for additional variables to try in the equation. Additional variables to test might include the length of time or frequency with which one listens to a particular spokesperson, similarity in demographics to the spokesperson, and level of familiarity with the spokesperson.

Future Research

Future research in the area of variables that might predict trust may include a further analysis of trust in spokespersons with a more in-depth look at the demographics and media characteristics of who trusts a particular spokesperson. Additional media characteristics might

include a more in-depth look at radio as a news source. It would be helpful to know what stations are being listened to, their political slant, and what radio personalities are most popular among respondents. It might also be beneficial to measure respondents' individual psychographic traits, such as general fear, cynicism, optimism, and general trust levels, in order to better explain trust in the government and various spokespersons during a public health emergency. The study of trust in spokespersons could also benefit from the application of the seven-point trust scale developed for this survey. It would be interesting to know if the use of job title (ie. President), name (ie. President Obama), or department (ie. Office of the President) had an effect on level of trust in essentially the same spokesperson. It may also be interesting to include mini profiles of the spokespersons for respondents to read that include the spokesperson's gender, race/ethnicity, and age.

Another area that might be explored relates back to the TCC Model (see Figure 2.1). It may be useful to examine the lower branch of the TCC Model regarding confidence. Respondents could be asked about their confidence in and their perceptions of how competent the government is to handle a public health emergency. The same could be done for the various spokespersons. This might paint a clearer picture as to whether the "confidence" branch of the TCC Model may or may not have an influence on trust levels in addition to cooperation.

Conclusion

As is taught in many journalism and mass communication schools, the health communicator cannot forget their audiences or afford to be ambivalent about the face they choose to represent their organization in a time of emergency or uncertainty. These decisions do matter and can greatly influence the outcome of a public health emergency. It is usually said that these decisions are made to garner the greatest audience attention to the message, but the

research presented in this paper suggests another reason. Trust in the message, the spokesperson, and ultimately the organization will have an affect on the public's cooperation or non-cooperation with government health directives during a public health emergency. Trusting health messages during a pandemic or other public health emergency has the potential to save many lives and makes health communication a critical part of the response to a public health emergency.

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APPENDIX A

H1N1 SURVEY INSTRUMENT*

The purpose of this research study is to understand the knowledge and attitudes of the public during the current influenza outbreak. We are asking you to complete a questionnaire that will take approximately 15-20 minutes of your time. If you are willing, this survey will ask you about your knowledge of influenza, where you get information about the disease, your willingness to take protective actions recommended by government officials, any barriers to following those protective actions and your attitudes toward the use of drugs or vaccines necessary to address this influenza outbreak. There are no foreseeable risks associated with this project, nor are there any direct benefits to you. This is an entirely anonymous questionnaire, and so your responses will not be identifiable in any way. All responses are confidential. Your participation is voluntary, and you may withdraw from this project at any time. If you have any problems or concerns about this survey, please contact Panel Relations at 800-782-7699, and someone will direct your questions to the appropriate researchers at University of Georgia and University of Pittsburgh.

Knowledge

1. **How knowledgeable are you about swine flu?**
    a. **Very knowledgeable**
    b. **knowledgeable**
    c. **somewhat knowledgeable**
    d. **Not knowledgeable at all**

*Questions in bold type were analyzed for use in the current research.

5. To the best of your knowledge, can you get the current swine flu in any of the following ways? (Check all that apply).

   ☐ Eating pork

   ☐ Coming in contact with pigs

   ☐ Being in close contact with someone who has swine flu-that is, within about three feet

   ☐ Being near someone who has swine flu, but not in close contact – that is, being at thirty feet away

   ☐ Contact with a virus infected door knob or other surface

   ☐ Don't know

6. Has there been a case of swine flu in your city or county?

   a. Yes

   b. No

   c. Don't Know

7. How likely do you think it is that swine flu will affect your family, friends, and neighbors? Would you say it is:

   a. Very Likely

   b. Likely

   c. Unlikely

   d. Very unlikely

8. How likely are you to become ill with swine flu? Would you say it is:

   a. Very Likely

   b. Likely

   c. Unlikely

   d. Very unlikely

9. If swine flu was or is in your community, how severe do you think the consequences might be to you or your family? Would you say it would be:
    a. Very severe
    b. Severe
    c. Not at all severe
10. If a member of your immediate household became ill with swine flu, how likely do you believe it is that the person might die from it?
    a. Very Likely
    b. Likely
    c. Unlikely
    d. Very Unlikely
11. If swine flu returns in the fall during normal flu season, do you expect it to be:
    a. More severe
    b. About the same as it is now
    c. Less severe
    d. Uncertain

How much do you agree or disagree with the following statements?

(Strongly Disagree > Disagree > Agree > Strongly Agree)

13. I am not concerned about getting swine flu.
14. A flu shot could give me the flu.
15. Lack of insurance or money would make it difficult for me to get a flu shot.
16. In my experience, flu shots have not been effective in protecting me from the flu.

17. I am not confident that a newly developed vaccine or drug for swine flu would be safe for me
18. I am confident that I can protect myself from swine flu.

19. In response to reports of swine flu, have you or has someone in your household done any of the following? Check all that apply:
    a. Avoided places where many people are gathered together, like sporting events, malls, or public transportation
    b. Talked with your doctor about health issues related to swine flu
    c. Purchased a face mask
    d. Worn a face mask
    e. Washed your hands or used hand sanitizer more frequently
    f. Avoided Mexican people and places such as restaurants or grocery stores
    g. Gotten a prescription for or purchased antivirals, such as Tamiflu or Relenza
    h. Other (Please specify_____)
    i. None of the above

20. How effective do you think the following behaviors are in preventing the spread of swine flu? *(Not Effective, Somewhat Effective, Effective, Very Effective)*
    a. Wearing a face mask?
    b. Washing hands frequently?
    c. Disinfecting home?
    d. Avoiding crowded places?
    e. Avoiding using public transportation?
    f. Keeping children home from school?

g. Staying home from work?

h. Avoiding airplane travel?

21. How much do you agree or disagree with the following statement? "I would submit to a voluntary quarantine if I was asked to do so by public health officials."

a. Strongly Disagree

b. Disagree

c. Agree

d. Strongly Agree

Support for government actions

22. The following is a list of things the government has done or might do to control an outbreak of swine flu. After you read each one, select whether you favor or oppose this action using a 4-point scale where 1 means "Strongly Oppose" and 4 means "Strongly Favor": (1=Strongly Oppose, 2=Oppose, 3=Favor, 4=Strongly Favor)

a. Encouraging people to stay home from work

b. Quarantining those who might have been exposed to the flu to limit their contact with others

c. Closing the borders to visitors from countries with outbreaks of flu

d. Closing schools, stores, places of worship, and other places where people gather

e. Helping people give health care to sick family members at home rather than having them be in the hospital

23. The following is a list of things the government might do to control an outbreak of swine flu. After you read each one, select whether you favor or oppose this action using a 4-point scale where 1 means "Strongly Oppose" and 4 means "Strongly Favor": (1=Strongly Oppose, 2=Oppose, 3=Favor, 4=Strongly Favor)
    a. Offer people vaccines or drugs that are new and not yet approved
    b. Setting priorities to determine who gets limited supplies of vaccines or drugs
    c. Giving out medicines or vaccines to people at a designated public location
    d. Closing down airports, shutting down railroads, and limiting car traffic to keep people from getting from place to place
    e. Using the National Guard or police to prevent movement between cities
24. Which response best describes your assessment of how the government has handled the current swine flu outbreak?
    a. Over-reacted
    b. Handled it just about right
    c. Didn't do enough
    d. Don't know

26. How open do you think the government is with information regarding swine flu?

a. Not at all open

b. Somewhat open

c. Open

d. Very open

27. How honest do you think the government is with information regarding swine flu?

a. Not at all honest

b. Somewhat honest

c. Honest

d. Very honest

29. How competent do you believe the government is in handling swine flu? Would you say the government is:

a. Not at all competent

b. Somewhat competent

c. Competent

d. Very competent

30. How committed do you believe the government is to protecting you from swine flu?

a. Not at all committed

b. Somewhat committed

c. Committed

d. Very committed

31. How much caring and concern do you think the government has shown about people who might be affected by this swine flu outbreak?

a. Not at all caring

b. Somewhat caring

c. Caring

d. Very caring

28. How much do you believe that the government's actions in response to swine flu are in your personal best interest?

a. Not at all

b. To some extent

c. In my best interest

d. Absolutely in my best interest

25. How much do you believe the government will protect you from the swine flu?

a. Not at all

b. Somewhat

c. Yes, will protect me

d. Absolutely will protect me

32. If public health officials declared that it was necessary for people to stay home from work and school, how difficult would it be for you to: (Very difficult, Somewhat difficult, Not too Difficult, or Not difficult at all)

a. Have day care for your child that is not with a group of children if schools were closed

b. Use private transportation to avoid crowds on public transportation

c. Stay home from work for 7-10 days

33. Please indicate yes, no, or not applicable on each of the following items.

a. I am able to work at home.

b. If I did not go to work, I will not get paid for the time I am at home.

c. I have sick leave at my job if I need to use it.

d. I could lose my job or business if I was not able to go into work.

e. My job can only be done in my workplace.

f. My workplace has a policy or plan for a crisis like a pandemic.

34. Have you ever been told by a health professional that you have any of the following chronic diseases? Check all that apply.

a. Heart disease

b. High blood pressure

c. Cancer

d. Diabetes

e. Asthma

f. Lung diseases such as chronic pulmonary lung disease

g. None

35. Do you have any diagnosed health condition or have you received any medical treatment that has weakened your body's ability to fight off disease?

a. Yes

b. No

55. How often in the past have you gotten a flu vaccination?

a. Annually

b. most years but not all

c. Once or twice

d. Never

36. Do you have a regular health care provider?

a. Yes

b. No

37. Do you have health insurance?

    a. Yes

    b. No

39. In a large flu outbreak, everyone may not be able to be vaccinated quickly. How fairly do you believe that people like you will be treated?

    a. Very fairly

    b. fairly

    c. Somewhat unfairly

    d. Very unfairly

40. How much do you agree or disagree with the following statements. (Strongly Disagree, Disagree, Agree, and Strongly Agree)

    If an outbreak of a new flu hit my community,

    a. I will get treatment in a timely way.

    b. All racial and ethnic groups will have equal access to new drugs and vaccines.

    c. There will be enough Tamiflu for everyone.

    d. There will be enough vaccine for everyone.

41. In a flu outbreak, the government may need to quarantine people to control the spread of disease. Please indicate your level of confidence in the following statements. (Not at all confident, Somewhat confident, Confident, or Very confident)

    a. I am confident that all people will be treated fairly.

    b. I am confident that people like me will be treated fairly.

43. When you seek health care, have you ever experienced discrimination or been hassled or made to feel inferior because of your race, ethnicity or color?

a. No/never

b. Once

c. Two-three times

d. Four or more times

Sources of Information

44. From which source have you gotten the <u>most</u> information about the swine flu outbreak:

a. Local TV news

b. National network TV news

c. Cable news

d. Newspapers

e. The Internet

f. National Public Radio

g. Local radio stations

45. From which other sources do you get information about the swine flu outbreak?

a. Health care provider

b. Family and Friends

c. Other (please specify_____)

46. How closely are you following the news accounts about swine flu?

a. Very closely

b. Closely

c. Somewhat closely

d. Not too closely

e. Not at all

47. Have you used any of the following media to get information about swine flu?

a. Twitter

b. Facebook

c. Blogs

d. YouTube

e. Digg

f. Other (please specify_____)

48. How often, if ever, do you use any of the websites below for information about swine flu?

(Once a day or more, Several times a week, Occasionally, or Not at All)

a. CDC (Centers for Disease Control and Prevention)

b. Local health department

c. State health department

d. The National Library of Medicine

e. WebMD

f. Pandemicflu.gov

g. Other_____

49. Below is a list of people who have been giving us information about swine flu. Please indicate how much you trust information delivered by this kind of person. Use a scale of 1 to 4, where 1 means "do not trust at all" 2 means "trust a little", 3 means "trust somewhat" and 4 means "trust totally"

a. **Information delivered by local elected officials such as mayor, county commissioner**
b. **Information delivered by state government officials such as governor**
c. **Information delivered by state or local public health officials**
d. **Information delivered by the Centers for Disease Control and Prevention officials such as Acting Director, Dr. Besser**
e. **Information delivered by the US Secretary of Health and Human Service (Kathleen Sebelius)**
f. **Information delivered by the Secretary of Homeland Security (Janet Napolitano)**
g. **Information delivered by religious leaders**
h. **Information delivered by your health care professionals**
i. **Information delivered by a doctor who appears regularly on TV such as Dr Sanjay Gupta on CNN**
j. **Information delivered by President Obama**
k. **Information delivered by TV, radio, or newspaper reporters**

50. If you were offered a flu vaccine that was recently developed and not yet approved by the Food and Drug Administration (FDA), would you be:

    a. Not at all worried
    b. Slightly worried
    c. Moderately worried
    d. Very worried
    e. Extremely worried

52. If you had to make a decision now, would you get a new but not yet approved vaccine for swine flu?

    a. Yes
    b. No
    c. Do not know

53. How confident are you in your decision about the vaccine?

    a. Not at all confident
    b. Somewhat confident
    c. Confident
    d. Very confident

Emergency use authorization

When the federal government declares a public health emergency, the US Food and Drug Administration (FDA) can authorize special emergency uses of medicines. This allows the use of a new experimental drug or the use of an approved drug for a group of people or a purpose for which it was not originally approved. The purpose is to provide the public with the best possible

treatment in an emergency. The FDA may provide a fact sheet about the drug that gives instructions and provides information about side effects, etc.

56. On a scale from 1: definitely would not to 4: definitely would, please tell us whether you would take a flu drug or vaccine that was offered under the emergency use authorization rule:

    a. If the drug were accompanied by a fact sheet

    b. If you did not receive a fact sheet

    c. If the drug were dispensed by a non health professional

    d. If the drug was dispensed by a public health professional

    e. If it were dispensed by your health care provider

57. During the current swine flu outbreak, the FDA has authorized the emergency use of Tamiflu. At the top, the fact sheet reads:

    "What is TAMIFLU®?*

    TAMIFLU® (oseltamivir phosphate) is a medicine that is approved by the U.S. Food and Drug Administration and treats influenza.

    At the bottom of the fact sheet in smaller print, it says " ***Certain aspects of this emergency use are not part of the approved drug applications. For more information, please refer to www.cdc.gov/swineflu*."

Given this information, how worried would you be about taking this drug?

1 Not at all worried

2 Slightly worried

3 Moderately worried

4 Very worried

5 Extremely worried

58. Given this information, would you accept the drug for: (1=Definitely would not, 2=Probably would not, 3=Probably would, and 4=Definitely would)

a. Yourself:

b. Your child: